

## Carmen Birchmeier

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Developmental Biology/Signal Transduction  
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### Curriculum vitae

- Since 2014 Co-coordinator, Collaborative Research Grant 'Towards a better understanding and diagnosis of congenital disease', Berlin Institute of Health (BIH)
- Since 2007 Member, board of directors, NeuroCure – Cluster of Excellence, Berlin
- 2005 – 2017 Deputy spokesperson, Collaborative Research Centre (SFB) 665 'Developmental disturbances in the nervous system', German Research Foundation (DFG)
- Since 2002 Coordinator/chair, MDC Neuroscience Program
- Since 2002 Full professor (W3-S), Charité, Berlin
- Since 1995 Research group leader, MDC, Berlin
- 1989 – 1995 Junior research group leader, Max Delbrück Laboratory, Max Planck Society (MPG), Cologne
- 1986 – 1989 Staff scientist, Cold Spring Harbor Laboratory, US
- 1984 – 1986 Postdoctoral fellow, Cold Spring Harbor Laboratory, US
- 1979 – 1984 PhD thesis, Universität Zürich, CH
- 1974 – 1979 Studies in Chemistry/Biochemistry, Universität Konstanz; University of California, San Diego, US; Eidgenössische Technische Hochschule (ETH) Zürich, CH

### Research fields

Our group is active in the field of developmental biology and mouse genetics currently focusing on development of the nervous system and muscle.

### Activities in the scientific community, honors, awards

- Since 2018 Member, Leopoldina – German National Academy of Sciences
- Since 2016 Member, Board of Directors, Einstein Center for Neurosciences Berlin
- Since 2015 Member, Scientific Advisory Board, Development, The Company of Biologists
- Since 2012 Member, Academia Europaea
- 2011 – 2017 Member, Scientific Advisory Board, Max Planck Institute for Biophysical Chemistry, Göttingen
- 2011 – 2015 Member, Fachkollegium 'Grundlagen der Biologie und Medizin', German Research Foundation (DFG)
- 2010 – 2017 Member, Scientific Advisory Board, Leibniz Institute on Aging – Fritz Lipmann Institute, Jena
- 2006 – 2010 Member, Scientific Advisory Board, Cell Networks – Cluster of Excellence, Heidelberg
- 2005 – 2009 Member, Scientific Advisory Board, BioInterfaces in Technology and Medicine, Karlsruhe
- 2002-2018 Coordinator/chair, MDC Neuroscience Program
- 2002 Gottfried Wilhelm Leibniz Prize, German Research Foundation (DFG)
- Since 2002 Member, European Molecular Biology Organization (EMBO)
- 1989 Bennigsen Förderpreis des Landes Nordrhein-Westfalen

## Selected publications

- Hernandez-Miranda LR, Ruffault PL, Bouvier JC, Murray AJ, Morin-Surun MP, Zampieri N, Cholewa-Waclaw JB, Ey E, Brunet JF, Champagnat J, Fortin G, Birchmeier C. Genetic identification of a hindbrain nucleus essential for innate vocalization. *Proc. Natl. Acad. Sci. USA* 2017; 114:8095-8100
- Birchmeier C, Bennett DL. Neuregulin/ErbB Signaling in Developmental Myelin Formation and Nerve Repair. *Curr Top Dev Biol* 2016; 116:45-64
- Sheean ME, McShane E, Cheret C, Walcher J, Muller T, Wulf-Goldenberg A, Hoelper S, Garratt AN, Kruger M, Rajewsky K, Meijer D, Birchmeier W, Lewin GR, Selbach M, Birchmeier C. Activation of MAPK overrides the termination of myelin growth and replaces Nrg1/ErbB3 signals during Schwann cell development and myelination. *Genes Dev* 2014; 28:290-303
- Cheret C, Willem M, Fricker FR, Wende H, Wulf-Goldenberg A, Tahirovic S, Nave KA, Saftig P, Haass C, Garratt AN, Bennett DL, Birchmeier C. Bace1 and Neuregulin-1 cooperate to control formation and maintenance of muscle spindles. *Embo J* 2013; 32:2015-2028
- Wende H, Lechner SG, Cheret C, Bourane S, Kolanczyk ME, Pattyn A, Reuter K, Munier FL, Carroll P, Lewin GR, Birchmeier C. The transcription factor c-Maf controls touch receptor development and function. *Science* 2012; 335:1373-1376
- Brohl D, Vasyutina E, Czajkowski M, Griger J, Rassek C, Rahn H-P, Purfürst B, Wende H, Birchmeier C. Colonization of the satellite cell niche by skeletal muscle progenitor cells depends on Notch signals. *Dev Cell* 2012; 23:469-481
- Willem M, Garratt AN, Novak B, Citron M, Kaufmann S, Rittger A, DeStrooper B, Saftig P, Birchmeier C, Haass C. Control of peripheral nerve myelination by the beta-secretase BACE1. *Science* 2006; 314:664-666
- Muller T, Anlag K, Wildner H, Britsch S, Treier M, Birchmeier C. The bHLH factor Olig3 coordinates the specification of dorsal neurons in the spinal cord. *Genes Dev* 2005; 19:733-743
- Muller T, Brohmann H, Pierani A, Heppenstall PA, Lewin GR, Jessell TM, Birchmeier C. The homeodomain factor *lhx1* distinguishes two major programs of neuronal differentiation in the dorsal spinal cord. *Neuron* 2002; 34:551-562
- Riethmacher D, Sonnenberg-Riethmacher E, Brinkmann V, Yamaai T, Lewin GR, Birchmeier C. Severe neuropathies in mice with targeted mutations in the ErbB3 receptor. *Nature* 1997; 389:725-730